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THE HISTORY AND AIMS OF THE SOCIETY OF THE SIGMA XI

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President of the Society

In all ages men of similar tastes have united themselves into organizations for social, political, patriotic, and other purposes. The Knights Templars, the Knights of St. John, the Vehmgericht, are examples of organizations which existed in the middle ages. The Knights of Pythias, the Odd Fellows, Tammany Hall, and many others are examples of more modern societies. It is not to be wondered at, therefore, that American college students should organize themselves into societies, according to their various characteristics and tastes, and that these should be more or less secret. There were probably many organizations of young men in American colleges before the present Greek-letter societies were formed, but their names have not come down to us and probably most of them were not secret.

The first secret Greek-letter society was founded at the College of William and Mary, Williamsburg, Virginia, in 1776 and was called the Phi Beta Kappa. It was formed for social and literary purposes and held frequent meetings. In 1779 it authorized the establishment of branches at Yale and Harvard and the next year ceased its own existence on account of the Revolutionary War. The chapter at Yale was founded in 1780 and the chapter at Harvard in 1781. These two chapters formed the chapter at Dartmouth in 1787. This was the beginning of the honorary society which is now non-secret and which exists in most of the well-known academic colleges.

Many other honorary and scholarship fraternities have been established, there being now fifteen of these with chapters in various colleges and universities. Some of them are purely scholarship organizations whose membership is open to any student; others admit only those from some particular department, as engineering, oratory, law, etc. In some the sole requirement for admission is scholarship, while in others the candidate's social qualities are taken into account as well as his scholastic standing.

Address delivered at the installation of the District of Columbia Chapter in Washington, D. C., February 19, 1916.

Phi Beta Kappa represents scholarship in the academic college. This organization has refused to admit scientific schools to membership and hence it has seemed desirable to establish a fraternity in engineering and scientific institution departments which will represent in them what Phi Beta Kappa stands for in the literary departments of the older colleges. With this object in view the Society of the Sigma Xi was organized.

The history of our Society is extremely interesting. A few years ago Professor Henry B. Ward, of the University of Illinois, published a *Quarter Century History* of the organization. As most of the members of this Alumni Chapter graduated from college before this history was issued, I wish to draw somewhat fully upon it in order to give you some idea of the various stages through which the organization has passed and the work which it is trying to do today.

New movements are always slow in growth and frequently depend in no slight degree upon things which have gone before. Usually the far-sighted vision of one man inaugurates a movement which, though it may never come to full growth in his day, receives an impetus which, through the assistance of others, finally is sufficient to launch the project and steer its course. In the early days of American colleges very little science was taught. At the time the Phi Beta Kappa was founded no science was required for admission to any college and in most colleges there were no scientific courses offered. Even as late as 1865 no college required any branch of science for admission and but few scientific studies were open to the students. Only one or two institutions offered any **laboratory work** even where formal instruction by means of lectures or recitations was given. It is evident that under these conditions no honorary scientific society could be established or maintained in any American university. But the establishment of engineering colleges and the introduction of natural and physical science in most of our higher institutions of learning soon produced a great change. While at first these subjects were regarded with suspicion and the professors of the old-time academic branches looked askance at the new men who were spending their time in laboratories, yet these new subjects gradually won their way and forced the advocates of classical training to acknowledge that they were worthy of a place in the college curriculum, and that their professors were students in the most profound sense of that term.

Doubtless many persons had thought that an honorary fraternity should be formed which would bind together the students in scientific subjects in some such way as the Phi Beta Kappa binds together the honor men in academic colleges. But Professor Henry S. Williams of Cornell University seems to have been the first to take definite steps to bring this about. In 1883, or perhaps before, he discussed the need of such an honorary society. In 1886 he organized a group of geological students and soon after drew up a plan for an organization to be called the Society of Modern Scientists. The preamble of this organization is interesting because it is the first statement expressing the desirability of an honorary organization of scientific men. It reads as follows:

"Therefore we believe it is highly desirable to encourage high attainments among the future students of Cornell University and other kindred institutions by recognizing by some mark of honor those who exhibit special ability in investigating, understanding, and interpreting the facts of nature in the various branches of modern science.

"We believe that this end may be attained by an association of such graduates as understand and thoroughly appreciate these principles, in a society to be known to the outside world by some simple and appropriate badge, who shall from time to time add to their numbers from each graduating class such men as they shall deem worthy to unite with them in elevating the tone of scientific study and encouraging and honoring the scientific scholar."

A few days before the Cornell Commencement in 1886, William A. Day, a senior, and Frank Van Vleck, a graduate of Stevens Institute and the youngest member of the Cornell faculty, planned the organization of an honorary society. The next fall they, with seven others, engineering students at Cornell, formally organized the Society of the Sigma Xi, adopted a constitution, and held meetings. The first printed constitution, probably issued in 1887, contains this preamble:

"Friendship in Science. While those whose heart and soul are in their work are coping with the great problems of Nature, let them remember that the ties of friendship cannot be investigated, but only felt. Let them join heart and hand forming a brotherhood in science and engineering; thus promoting and encouraging by those strong, personal attachments of friendship, the highest and the truest advances in the scientific field. To lend aid and

encouragement to those newer brothers who likewise laboring in the same sphere are aspiring to honored positions. And in collegiate halls to award an honor which to scientific recipients shall signify 'Come up Higher.'

"Therefore with these ends and objects, the signers of this paper do hereby agree to lend their efforts to the establishment of an organization to be publicly known as the Society of the Sigma Xi."

It is signed by five graduates of Cornell, one of Stevens Institute of Technology, and three of the Rensselaer Polytechnic Institute. While it was expressly stated in the preamble that it was an organization to promote science and engineering, yet all of its members were engineers or graduates of engineering institutions, and it was believed by outsiders to be strictly an engineering society. Professor Williams heard of this organization when he tried to get some of the engineers at Cornell to join his Society of Modern Scientists. He at once came to the conclusion that there ought not to be two organizations somewhat similar in character, but that the movement would be stronger if they could be united. He thereupon gave up the Society of Modern Scientists and not only joined the Sigma Xi, but gave the whole force of his influence and personality to the latter organization. That this was very early in the history of the Society appears from the fact that at the second formal meeting Professor Williams' proposal for amalgamation was received, and at the fourth meeting he was elected a member. It is also evident that the organization of engineering students calling itself the Sigma Xi was able to see a greater and more brilliant future if it could enlist the active sympathy of all scientific professors and students in the university, and hence it gave up its original plan of limiting its membership to engineers, and cordially joined with Professor Williams in the larger conceptions which he had in mind.

I said a few moments ago that new movements do not spring into being immediately; that they are usually developments from things which have gone before. It is known that several honorary scientific societies were proposed at different times and that one was actually formed at the University of Rochester. This society opened correspondence with other scientific departments but for some reason the movement did not seem to grow. The original chapter at the University of Rochester was finally given up.

Professor Williams was the first president elected by the Cornell Chapter. He became the leader in the new movement and to him the Society owes very much of its subsequent success. The Cornell Chapter, known as the Alpha Chapter, was formally inaugurated June 15, 1887. Professor Williams delivered his inaugural address as President on the subject The Ideal Modern Scholarship.

I will follow the example of Professor Ward in his history and quote from this address.

"We meet today to inaugurate a new ideal of scholarship:
* * * a new ideal, not a scholarship: for we have many scholars of this modern sort to whom we may look up as our models, but to lift this modern scholarship to a place of first rank; to make it the ideal for ambitious students; to make the attainment of it an honor to be coveted beyond others; this has not been attempted before in the history of American Universities.

"The old ideal, before the mind of the literary scholar, contemplates such a training of the intellect and such an acquirement of learning as shall fit the scholar to grasp quickly, accurately, and thoroughly, knowledge bound up in the literature of the world, together with the power to communicate it readily, vividly, and forcefully to his fellows. This is the ideal which most students aspire after * * * * * and it is reasonable to ask why should anyone propose another? * * * We propose a new ideal because we * * * would follow the spirit of that scholarship, the letter of whose law binds and excludes us. * * *

"I cannot do better than express * * what we conceive to be the essence of the scholarship which it is the purpose of our Society to recognize. * *

"The first element in scholarship is learning. The real scholar sets before himself * * to know everything of something and something of everything. But the something, as well as the everything, changes. * * The learning which yesterday made the scholar, is ignorance today. The spirit of scholarship, then, demands * * modern learning. The old scholarship taught us to reverence the knowledge recorded in books; * * in the course of time, thus, authority came to be respected more than accuracy and imitation of the ancients received higher honor than adaptation to modern conditions. The modern scholar seeks knowledge as a means toward the vigorous expression of his manhood, a knowledge * * of those seething elements in the midst of which he lives, and of which he is one. * *

"The second element essential to the scholar is power of communication with his fellows.* * He must have acquired a thorough familiarity with his own language as a vehicle of thought, but besides this he must be able to use German and French; with these he can reach the civilized world.

"Thirdly, **he must be a specialist.** In his specialty he must think for himself, act for himself. Here he must rest on no one, but be himself a support for others. He must be a constant student, constantly advancing, and, making stepping-stones of his dead self, rise to higher things.

"Such are a few of the elements of that scholarship which it is the purpose of our Society to recognize, foster, and develop. * * In lighting your torches we bid you light them at the brightest living altars of learning, and not at the smouldering coals of dead issues. * *

"He who only imitates the past forgets the demands of the present, * * but he who adapts himself best to modern issues, who serves best the present age, has been, will always be the successful man."

At the fifth meeting of the Society four professors and five graduate students were elected to membership. Some of those men have since become very well known. Among them are Professor Robert H. Thurston, long considered the leading professor of Mechanical Engineering in the United States; John Henry Comstock, Professor of Entomology, Cornell University; William R. Dudley, Professor of Systematic Botany, Leland Stanford University; Charles David Marks, Professor of Civil Engineering, Leland Stanford University; Charles S. Prosser, Professor of Geology, Ohio State University; Albert W. Smith, Director of Sibley College, Cornell University; Frederick W. Simons, Professor of Geology, University of Texas; and Henry E. Sommers, Professor of Zoölogy and State Entomologist, Iowa State College. Of these eight men, seven are mentioned in American Men of Science and another one would have been if he had not died before that volume was issued. This shows the character of the first members of our organization and the standard which was set up.

At the sixth meeting, held on May 20, 1887, it was reported that chapters at Union College and the Rensselaer Polytechnic Institute had been organized. There seems to have been a feeling from the first that women would be admitted to the Society on the same basis

as men, but it was not until December 5, 1888, that the first women were chosen. Five were then admitted and since that time there has been no question as to the eligibility of women for admission.

The growth of the Society has been slow. Soon after the parent chapter was organized numerous institutions applied for charters and several were granted. These, however, were not in all cases organized and it has since become evident to thoughtful leaders of this new movement that progress should be made very slowly. Before introducing a chapter into any university it seems well to be sure that the strong leaders of science in the institution are in favor of the establishment of the chapter and will lend their hearty coöperation not only to its organization but to its meetings. When the first annual convention met in 1893 there were but four chapters; three in the State of New York, and one in Kansas. In 1893 the Yale Chapter was established and from that time this has been one of the largest and strongest chapters in the Society. Charters have since been granted as follows:

Minnesota	1896
Nebraska	1897
Ohio	1898
Pennsylvania, Brown, and Iowa	1900

At the close of the fifteenth year of its life the Society had eleven chapters.

Stanford was founded in	1901
California and Columbia in	1902
Chicago, Michigan, Illinois in	1903
Case and Indiana in	1904
Missouri and Colorado in	1905

At the close of the twentieth year of the organization there were twenty-one chapters on its roll.

Northwestern and Syracuse were organized in	1906
Wisconsin and Washington State	1906
Worcester	1908
Purdue	1909
Washington University	1910

When the Society was twenty-five years old it had twenty-eight active chapters.

The University of Texas has since been organized and we are installing tonight the thirtieth chapter, which is the first Alumni Chapter.

Professor Ward says in classifying these chapters: "Of the institutions represented on the chapter roll, thirteen are state universities, and one, Purdue, a state technical school; while two others, Cornell and Pennsylvania, have somewhat analogous positions in eastern states. The latter are included usually, however, in endowed institutions of university rank, in which Sigma Xi has eleven chapters. In addition there are three endowed technical schools having Sigma Xi chapters. Geographically considered the Society is represented by chapters in seven endowed universities and two endowed technical schools in the North Central regions; while two state universities and one endowed institution on the Pacific Coast are represented. There are in all ten chapters in the east, nineteen west of the Alleghenies, of which three are on the shores of the Pacific. There is one chapter in the South."

The first regular convention of the Society was held at Cornell University in May, 1893. Professor E. L. Nicholas, then President, delivered an address upon the subject Photography as an Instrument of Research. Eight biennial conventions were held from 1893 to 1906, a special convention was held in 1907, and annual conventions have been held ever since. All of these conventions, with the exception of the first, have been held in conjunction with the annual meeting of the American Association for the Advancement of Science. Again I wish to quote from our Historian's record.

"The naturalness of this affiliation was so apparent that when the Association changed its custom and replaced the midsummer meeting by one in the holiday period, Sigma Xi followed the change and since then has met regularly in Convocation Week, and at the place chosen for the meeting of the Association. These gatherings have been unusually successful in bringing together scientific workers whose technical interests are so varied that they could hardly hope to come in contact in any other way. The Sigma Xi dinner has been a regular feature of the gathering ever since it was so successfully inaugurated at St. Louis. * * * Subsequent dinners have assumed a less formal character, but, in spite of the pressure of other engagements during the limited period actually available in Convocation Week, the social part of the Sigma Xi Convention has been greeted each year with increasing interest and pleasure. The younger men welcome gladly this opportunity to meet on an informal, fraternal basis, those who have won a place in science; and the varied representation on this occasion from year to

year is the means of developing a growing interest in the achievements of the Society among many who would otherwise know little or nothing regarding its work and the results thereof."

At the second annual convention held in 1895 Professor Williams, one of the charter members and the Yale representative of the committee on extension which had been appointed at the first convention, presented the views of the committee regarding the policy of the Society in founding new chapters. These remarks and the recommendations adopted have since been incorporated as a part of the Constitution, forming Appendix 1. Professor Williams so clearly states the policy of the Society that I wish to quote his remarks in full.

"The policy of the Society in the establishing of new chapters is a matter of vital importance to its future growth and standing.

"The Society was established in 1886 by a few earnest workers in the engineering sciences, as a means of rallying and encouraging those qualities which were deemed of the first importance in their own lines of investigation. It soon became broadened and enlarged to represent the general ideals of highest scholarship in the minds and before the ambitions of every earnest student in any branch of science. It proposed to recognize and elect to its membership those men in our institutions of learning who should exhibit in a marked degree the qualifications of natural endowment and training required for successfully conducting original research in the various branches of science.

"Thus original research bears the same relation to Sigma Xi as literary scholarship does to Phi Beta Kappa; and it is believed that the cause of original research, and that part of the higher education which trains the qualities required in scientific pursuits, will be benefited by honoring with election to Sigma Xi those men who during their college course show marked proficiency in these directions.

"In founding new chapters the Society should realize its responsibility and should not grant a charter to every institution that may think itself properly equipped to teach science; but on the contrary great care is necessary in establishing chapters, in order to ensure the proper discrimination of men who are to go forth as representatives of the best results of scientific education in the United States. To attain these ends our policy should be eminently and sternly conservative, while at the same time we should be fully alert and sensitive to the needs of progress in science and education.

"We should not plant the Society in any institution which has not already developed a clear appreciation of the dignity and needs of the scientific education, and a vivid realization of the distinction between scientific and literary ability. In order to make Sigma Xi an honor society it is essential that the men of first rank in the institution be given election, and this will not be possible where Phi Beta Kappa sets the only standard of excellence, and scientific men are ranked as only second to literary scholars.

"In establishing a new chapter, therefore, we should not take into consideration **any claim of advantage** to accrue to the institution by such chapter, or any mere desire of individuals to become members of the Society; but in each case we should make sure that we entrust the power of distributing the honor of membership only to such persons and institutions as are capable of giving the education and training necessary to the carrying on of scientific investigation, and as have shown by their organization and equipment that they know the requisite qualifications, and are likely to confer the honor where it properly belongs.

"We should not only look for the active and pervasive spirit of research, but we should also be well assured of the hearty coöperation of the scientific faculty in the establishment of the local chapter and in maintaining its standing in harmony with the interests of the Society."

After this address the following recommendations were adopted:

- (1) That the Council, in determining the award of a charter to an institution, should give a close scrutiny to the facilities and opportunities of the institution for the advancement and encouragement of original research in the various branches of science, and to the qualifications of its scientific faculty to accomplish these ends.
- (2) That the number of distinct branches of science represented by full professors in the institution should be at least five; and these branches should include mathematics, physics, chemistry, biology (some department of it) and engineering (some department of it).
- (3) That the number of graduate and resident members of the institution required to make up the charter membership should be at least ten; and of these not less than nine should be members of the instructional body; and each person should be adjudged by the Council to be fully worthy of membership in the Society."

The adoption of this appendix and the recommendations makes it perfectly clear that this society is not a scholarship society, like

the Phi Beta Kappa, but a research society. In this respect it is unique, being the only organization of its kind in the country. Scholarship alone will not enable a person to gain admittance. He must either have done some creditable scientific work or, if an undergraduate, must have given evidence of those qualities which in the future will render him able to do research work.

The Society now has approximately 10,000 members. At the time the *Quarter Century Record and History* was published its members were found in forty-nine states in the Union, in Panama, Hawaii, the Philippines, Porto Rico, Canada, Mexico, Central America, the West Indies, various states of South America, England, Austria, France, Germany, Roumania, Russia, Spain, Sweden, Switzerland, Turkey, Asia Minor, China, India, Japan, Korea, Cape Colony, the Belgian Congo, Egypt, Natal, Orange Free State, Rhodesia, the Transvaal, and Australia.

Having traced the history of the Society from its earliest conception to the present time, I would like to say a few words in regard to its object and its methods of work.

Its Constitution has been revised from time to time, the last revision taking place at the annual convention in 1914.

Section 2, Article I, says: "The object of this Society shall be to encourage original investigation in science, pure and applied, by meeting for the discussion of scientific subjects; by the publication of such scientific matter as may be deemed desirable; by establishing fraternal relations among investigators in the scientific centers; and by granting the privilege of membership to such students as during their college course have given special promise of future achievement." I would like to discuss this section.

First. The Society is to encourage original investigations in both pure and applied science. There are no narrow limitations. Other societies devote themselves to investigations in certain branches, as physics, biology, chemistry, etc., but this society embraces work in all of the sciences and is equally interested in them all. Moreover, it does not separate investigations in pure science from those in applied science. There was a time when the research worker in pure science often claimed that he had discovered something which would never be of practical value but that claim can no longer be made. It has been proved so many times that discoveries made in pure science one year have been useful in applied science the next year that it is now unsafe to say

there is anything in the realm of knowledge which cannot be put to practical use.

Second. Original investigations are to be encouraged by meetings for the discussion of scientific subjects. Each chapter holds such meetings. Sometimes these are private, that is, confined to members of the Society. At these meetings it is customary to listen to addresses upon scientific subjects or reports upon scientific investigations from members of the chapter. While an original investigator must depend upon himself, upon his own resources, upon his own knowledge, yet he should not work alone. He should mingle with other men who are doing research work in his own line or in other lines if he is to get the most out of his life and to succeed the best in his own line of endeavor. Formerly business men were jealous of their own business and methods and would not permit anything to go out of their establishments which would give information to their rivals. Now they have learned that they can be of the utmost help to each other and that their general methods of conducting business, many of the things which they formerly regarded as secret, ought to be given to other men who are pursuing similar lines of business and that no damage can come to them through this friendly intercourse. In accordance with this belief there are associations of wholesale men in almost every city, representing all branches of wholesale business; there are associations of retail merchants representing all branches of retail trade and in all of these organizations every member is willing to acknowledge that the new method has been of advantage to him and has never hurt his business.

Many centuries ago scientific workers were exceedingly jealous of all who might be working in the same field. Soon after his invention of the astronomical telescope, Galileo noticed that there seemed to be two balls, one on each side of the planet Saturn. Not quite satisfied with the appearance he announced his discovery in the form of a logogriph which consisted of the letters of a Latin sentence meaning "I have observed that the farthest planet is triple," transposed in such a way that the sentence could not be read. This held for him the priority of discovery and he did not translate his logogriph until he was satisfied that his observations were correct. In more recent times it has not been uncommon for men doing research work to be somewhat loath to speak of things upon which they were working for fear that someone else might

supplant them and first publish results. I believe that this spirit has almost if not entirely disappeared. Scientific workers while they do not publish or spread broadcast statements in regard to things which are not fully settled, do not hesitate to speak with other workers in the same branch of science about the things which they are doing, and I am sure they frequently get valuable aid from those who have worked along somewhat similar lines.

Some of the meetings of the Society are open meetings to which the public is invited. Usually on such occasions a speaker of eminence from the university or from some other university delivers an address not so highly technical but what a well-read person can understand it. Many chapters have social meetings or they combine social with scientific meetings. Such meetings are frequently held at clubs or at the residences of members. For many years the Phi Beta Kappa has held a meeting at Commencement in most academic institutions and a public address has been delivered. Some of the most enjoyable addresses ever presented to college audiences have been those given under the auspices of this Society. A few years ago the chapters of the Sigma Xi in some institutions determined to hold open meetings at Commencement and to have addresses which would form a part of the commencement week program. In some instances Phi Beta Kappa and Sigma Xi have united, each furnishing speakers in alternate years. In other institutions where there are Commencement exercises in the middle of the year as well as in June, Phi Beta Kappa furnishes a speaker for one of the commencements while the Sigma Xi furnishes the speaker for the other. By all of these means original research is promoted and information in regard to scientific matters is disseminated.

Third. By publication of such scientific matter as may be deemed desirable. I do not know to what extent the Society has published the results of scientific investigation but probably very little has as yet been done. In this connection, however, I would like to call attention to the work done by the California Chapter not long since. A few years ago the bubonic plague gained a foothold in the town of Berkeley, California. As the local authorities were doing nothing to combat the spread of the disease, the California Chapter of the Sigma Xi interested itself in stirring up sentiment to compel the adoption of preventive measures. The chapter appointed a committee to investigate the conditions. Its report was presented to the Society and consisted of an exhaustive review of

the situation and recommendations for its betterment. There were no public funds and the chapter started a subscription among its membership which was the beginning of a larger public subscription amounting to many thousands of dollars. The report of the committee was printed and was very widely distributed not only locally but in various parts of the country. Here is one instance where a chapter of Sigma Xi has taken an important part in civic matters and has, through the publication of a scientific report, aroused the attention of the people and has been the means of combatting a most dangerous disease.

This same chapter also has taken an active interest in university matters and has on several occasions made recommendations which have been adopted and carried out by the authorities of the university.

Fourth. By establishing fraternal relations among investigators in the scientific centers.

The motto of our Society is "Companions in Zealous Research." The chapters of the Sigma Xi perform a function not accomplished by any other organization in our universities. The man who is working in physics may know his subject thoroughly and may be conversant with the original work which is being carried on in all departments of physics in every part of the world. While he may restrict his own activities to the branch of science in which he is actively interested, his sympathies should be broader and he should have some knowledge of what is going on in other branches of science. By bringing together the workers in all scientific subjects, by the reading of papers relating at times to one branch of science and at other times to other branches, all of the members become familiar in a general way with what is going on in the whole scientific world. Thus a liberalizing element is introduced into the lives of scientific men who might otherwise become narrow and selfish because of their lack of knowledge of what other men are accomplishing. It sometimes happens too that the work being done in one branch of science will call to mind things which may be done along other lines and may even suggest valuable methods of research.

The social features of these meetings are also worthy of consideration. Most men crave some social life. It is a rest from their ordinary labors and they find they go back to their work refreshed and stimulated by the change. The meetings of the Sigma

Xi with their social features perform this function. Not all of the conversation relates to science, and the meetings are a means of relaxation which show their beneficial results in increased scientific activity later on. The man who confines himself to his laboratory all the time will find his vitality impaired, his spirits dulled, his interest flagging. The Sigma Xi seeks to help him to escape these conditions by presenting intellectual activities foreign to his usual work and social opportunities which give needed rest and refreshment.

Fifth. By granting the privilege of membership to such students as have, during their college course, given special promise of future achievement. The Constitution states that any undergraduate in the fourth year class or of the class substantially equivalent thereto, who has given promise of marked ability in those lines of work which it is the object of this society to promote, may be elected to membership. All of the chapters do not pursue the same policy in the election of undergraduates. Some do not elect any students except those who are doing graduate work. Others elect seniors at the close of their senior year, while a few elect seniors during the early part of their senior year. The recruits for the ranks of the research workers must come as a rule from the colleges. Sometimes the courses in college do not bring out a student's ability for original thought and in other cases they help the student to develop a decided tendency toward creative work. It was the thought of those who drew up our Constitution that such ability should be recognized and rewarded while the student was in college and that if possible there should be a closer bond between the scientific professor and the student who seemed to have the power of investigation. Perhaps in the future we shall do more to encourage young men in college to look forward to lives of research.

The Constitution also provides that an alumni chapter may be established at any place other than an educational institution, wherever the objects of the Society would be furthered; and it is stated that the membership of alumni chapters shall be composed of alumni members of collegiate chapters, and such graduates of other institutions of learning at which there are no chapters of the Society, as may be elected to membership in the Society by alumni chapters. In accordance with these constitutional provisions this Washington Alumni Chapter has been organized. It seems appropriate that the first alumni chapter should be established at our national seat

of government where there are so many scientific departments doing research work, where there are research organizations under private auspices, and where so many original investigators reside. I have mentioned the constitutional statement in regard to the way in which the objects of the Society are to be promoted. There is no doubt in my mind but that these objects can be promoted in an unusual way by this chapter. You will have one of the largest, if not the largest, chapter in the organization; you can easily meet for the discussion of scientific subjects—you can promote the publication of scientific matter—you can establish fraternal relations among investigators, and in fact you can do everything which this Society is supposed to do except to grant the privilege of membership to graduate and undergraduate students. Here as nowhere else there are men representing different branches of science who can bring to your meetings a knowledge of what they themselves are doing as well as what is being done in the world at large in the sciences which they represent, and here you can have that fellowship of scientific workers which can only exist where many men of the same tastes and similar aspirations can get together for conference and fellowship. You may not always agree upon methods of work; there may be rivalry among you in regard to scientific research, but it should be that generous rivalry which may always co-exist with the deepest friendship.

This is the first Alumni Chapter to be established. All the members of our Society will look to you to see with what success you carry out the aims of our organization. If you make this a vigorous, energetic, live force for the promotion of scientific work, other alumni chapters will be established in other places.

The Society of the Sigma Xi pledges you its cordial support and coöperation in the work which you have undertaken.